



**Dr. Gary Jedlovec**  
**Chief, Earth Science Branch**  
**NASA / MSFC**





## Chronology of Bill's time at NASA / Marshall Space Flight Center

- 1989            Joined NASA as a Coop student
- 1990            Graduated from Penn State University, full-time NASA Employee
- 1990 - 2008    **NWP research and regional modeling studies**
- 1991 - 2008    **Adjunct Prof. University of Alabama Huntsville**
- 2001 - 2005    **Established / led SPoRT program**
- 2005            **Leadership Development Program / HQs / GSFC detail assignment**
- 2006 - 2008    **Deputy Manager, Science and Exploration Office**
- 2008            Off to do great things at NOAA



## Research Scientist (1990-2002)

- Extended dissertation work by exploring improvements to weather forecast models with the assimilation of satellite data
- PI for regional scale coupled land/atmosphere modeling EOS IDS for global water cycle
- Co-I on GSFC research projects on hydrologic studies
- PI on a GCIP project to develop a regional climate model composed of the PSU/NCAR MM5 and implemented a new soil hydrology model into MM5/BATS
- PI on a USWRP project which developed the first real-time system to assimilate the GOES land surface products into the MM5.
- Authored / co-authored numerous papers
- PI on a NOAA NESDIS project to assimilate NESDIS GOES data into a mesoscale models - results influenced NCEP to reconsider their approach



## Professor and Mentor

- Adjunct Professor UAH
- Taught courses in atmospheric dynamics, numerical weather prediction, forecasting and analysis, and synoptic meteorology - demonstrating dynamics in the real world!
- Provided leadership and structure for the formation of UAH's Atmospheric and Earth Science Department
- Advised many students, provided career guidance, and mentored graduate students and staff on careers in atmospheric science





## Collaborations

- USWRP project to enhance technology transfer between NASA / MSFC research scientists and the operational meteorologists within the NWS
  - Output from assimilation system are posted on the GHCC web site for display in AWIPS
  - Close interaction between MSFC scientists and NWS (BHM)
  - Collaborative Workshop on Mesoscale Modeling and Short-term Convective Forecasting.
- Co-I on a NOAA/NWS COMET program to improve the early detection of severe weather events in the Tennessee Valley Region.



## *R2O – O2R Collaborations*

### 2000

- NASA establishes partnership with UAH to establish a cooperative research and education, moves its science activities to the new NSSTC on UAH campus
- NWS agrees to establish a new Huntsville weather office at the NSSTC



### 2001

- August 27, NASA establishes a testbed at MSFC, much like the newly formed tri-agency JCSDA, focused on improving short-term weather forecasts using satellite observations and regional weather models – Short-term Prediction Research and Transition (SPoRT)
- The NSSTC provide a unique environment for this testbed to focus on transitioning unique data and research capabilities to the operational weather community



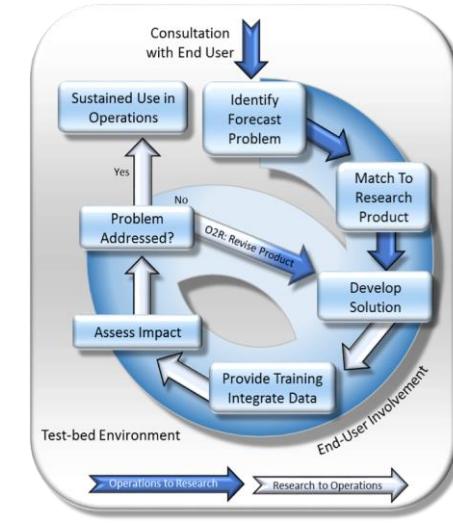
## SPoRT – A Unique R2O-O2R Paradigm

- NWS forecaster 10-month detail to SPoRT

“I always saw Bill ....as my mentors during the early days of the HUN office. I learned so much .... (in) the 10+ months I spent on the NASA SPoRT side.... probably did more to shape my career than any other time.” *Chris Darden former MIC HUN (9/2021)*

- NOAA R2O Report
- Create an initial R2O-O2R paradigm that involved the forecaster in the entire process
- Begins collaboration with 4 regional WFOs

Opportunity to use research knowledge, weather forecast experience, and teaching / communication skills together to make changes / improvements in the forecast process



Darden, C., B. Carroll, S. Goodman, G. Jedlovec, B. Lapenta, 2002: *Bridging the Gap Between Research and Operations in the National Weather Service: Collaborative Activities Among the Huntsville Meteorological Community*, NOAA, Technical Memorandum NWS SR-222.

### Bridging the Gap Between Research and Operations in the National Weather Service: Collaborative Activities Among the Huntsville Meteorological Community

Chris Darden  
WFO Huntsville, Alabama

Beth Carroll  
University of Alabama – Huntsville

Steve Goodman, Gary Jedlovec, and Bill Lapenta  
NASA/MSFC, Huntsville, Alabama

[NOAA Tech Report](#)



## Aspirations to Lead Change

- Selection for NASA LDP in 2005
  - 6-month detail at HQ and GSFC
  - Influence on NASA's application program
  - Help start NASA's MAP
- 2006 Deputy Manager MSFC's Science and Exploration Office
- 2008 accepts position at NOAA as Deputy Director of EMC

